



ITV INTERROGATOR SETUP AND REGISTRATION

Date: 21 November 2008

Quick Notes Objective: To provide the operational forces a step by step instruction on how to set up and register the Interrogator and create RFID tags for unit equipment.

All RFID hardware must be registered with the ITV server prior to use. ITV Registration requires an Internet connection. ITV provides global visibility, tracking and detailed information of tagged items. Once you have added your server(s), you must assign a server from the list to be the default server you will use for ITV transmissions. The interrogator is used to burn and read RFID tags. The interrogator is also known as a SaviReader. It connects to a desktop or laptop using the COM Port. Interrogators need to be registered before used. All registration files (*.TIP) are sent to a USMC Routing server, Remote Access Server (RAS), via FTP and then sent to the ITV server via SFTP (SSH + FTP).

MDSS II SYSTEM ADMIN

NOTE: The "Registration File" created by the process of setting up and registering the 650/410 interrogator uses information from the MDSS II System Administrator. Prior to adding the interrogator and burning RFID tags the user must have accurate information in MDSS II System Administrator. If you did not set up the MDSS II account on the computer you will need to ensure the user information is updated in MDSS II through the SYSADM function; <START>, <PROGRAMS>, <MDSS 7.2>, <System Administrator>. Login the SYSADM with the User ID and Password. Create an account with correct contact information. This information is sent out in the registration file created by the interrogator during the setup and is used by the RFITV Helpdesk to notify the MDSS II user of any problems concerning the tags associated to that registration file. Add administrator privileges so the user can edit all plans in the database. DO NOT DELETE THE CURRENT ADMINISTARTOR UNTIL YOU HAVE CREATED A NEW ONE AND GIVEN ADMINISTRATON PRIVELEGES AS THIS WILL LOCK YOU OUT OF THE PROGRAM. Call the help desk if you have questions with this process.

SET UP ITV CONNECTION IN MDSS II

User needs to ensure the interrogator is powered and working correctly. After applying power watch the window on the interrogator. The serial number will flash, one digit at a time, and when it is ready it is display a blinking dash with a solid red dot. Use the supplied RS-2324 to RS-485 Interface converter cable to connect the Interrogator to the computer.



1. In the MDSS II plan select <AIT>, <Setup>, <ITV>. The ITV- Remote Access Server Listing window displays. Click the <ADD> to add an Interrogator or <Edit> to select a current interrogator and change the information entered. The ITV Remote Access Server window displays. It is here the user can edit connection to the Remote Access Server (RAS). This is the only information that the user can enter to correctly be connected to the RAS. Enter the routing server information as entered above (Password is case sensitive: Rf1du5mctv). Click the <OK> to exit ITV setup.

Edit Remote Access Server

IP Address: 192.156.37.115

Port: 21

User ID: usmcrfid

Password:

Upload Interval Min: 15

Description: Camp Lejeune RAS

☐ Disable passive FTP transfers

OK Cancel Help

EDIT DELETE ASSIGN UNASSIGN CLOSE

NOTE: DO NOT check box – Disable passive FTP transaction, it is a “Direct ITV Connection”. This informs the system that the server you are adding is the actual ITV server. The only scenario where this option applies is where no connection to any of the USMC ITV Routing Servers are available. DO NOT use this option unless you are specifically informed to do so, and should only be used in extremely rare circumstances.

3. In the “ITV- Remote Access Server Listing” window select the record then <Assign> tab, this will highlight the record light green. Then select <CLOSE> to exit the window.

ITV - Remote Access Server Listing

IP Address	Port	User Id	Upload Interval	Description
192.156.37.115	21	usmcrfid	15	Camp Lejeune RAS

ADD EDIT DELETE ASSIGN UNASSIGN CLOSE HELP



SET UP INTERROGATOR

1. In the MDSS II plan select <AIT>, <Setup>, <Interrogators>. At the Interrogator listing window Select <Add>. This brings up the Add Interrogator Window. This window allows the user to identify the Interrogator's information to the server. Once all information is entered select <OK>.

Add Interrogator

Interrogator ID (Serial #): 42618

AIT Location Code: ACE IN

Interrogator Name: LEJEUNE
Military Installation or City Name (No Spaces) plus Suffix

Interrogator Site Location: LEJEUNE
Installation/City (Suffix is system automated)

Interrogator Sequence #: 618

COM Port: COM 1

Communication Protocol: ☐ RS-232 ☒ RS-485

Interrogator Model: ☐ 410R ☒ 650R
☐ 650-P Mobile Interrogator
☐ Signpost Interface Entry

Interrogator Description: LEJEUNE NC BLDG H1 G4 SMO
(Interrogator Name; State/Country Code; Location Description)

Interrogator Function: Read ☐ Write ☒

Signal Strengths: Control 100% Wakeup 100% Data 100%

OK Cancel Help

MDSS II RFID module contains SAVI SDK owned by Savi Technology, Inc.

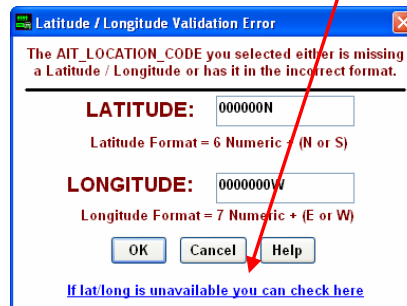
Note: To ensure the interrogator setup is correct in MDSS II, the following information is provided as an example of what information the user will need to know/enter.

- **Interrogator ID (Serial #):** Found on the 650/410 Interrogator
- **AIT Location:** Data found in MDSS II plan and must have a Lat/Long assigned to it.
- **Interrogator Name:** Military Installation Name or City Name (No Spaces)
 - (LEJEUNE or PENDLETON)
- **Interrogator Site Location:** Auto Populates the Installation/City
 - (LEJEUNE or PENDLETON)
- **Interrogator Sequence #:** Last 3 Digits of the Interrogator Serial Number.
- **COM PORT:** 1
- **Communication Protocol:** RS-485
- **Select the Interrogator Model:** Found on the 650/410 interrogator
- **Interrogator Description:** (Interrogator Name; State/Country Code; Location Description)
 - (LEJEUNE NC BLDG H1 G4 SMO)
- **Interrogator Function:** Write
- **Signal Strength:** Do not change



Note: If a Lat/Long was assigned to the AIT Location prior to this step the below window will not appear. If a Lat/Long was not assigned to the AIT location prior to this step the following window will appear. The user should know the Lat/Long for this AIT location and must enter it here. If you leave the Lat/Long all Zeros, the registration file will be rejected by the ITV help Desk. If the user does not know the Lat/Long select the link at the bottom of this window.

2. If needed enter Lat/Long here and select <OK>.

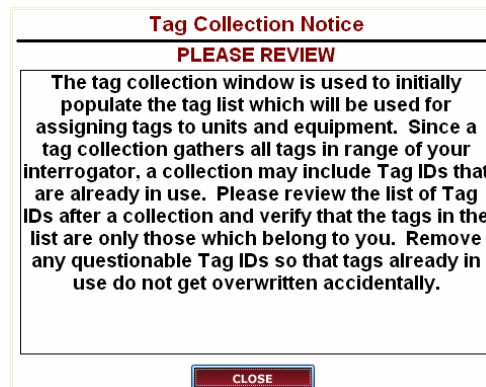


3. Selecting OK will bring the “Interrogator Listing” window up, validate the information you have entered and select <Close> to exit.

STEPS TO COLLECT, ASSIGN, BURN AND READ TAGS

COLLECTING TAGS: Initially, LOG AIS must populate its database with a list of tags so that they can each be assigned to equipment in the UDL. After a collection, the user should verify that all tags in the tag listing are ones that they should be using and not random tags in range of the interrogator during a collect. Tag IDs can be assigned to specific Units so that each unit can filter their tag listing to display only the tags they should use during equipment association.

1. Select <AIT>, <Collect>, this will bring up the Tag Collection Notice. Select <Close>.



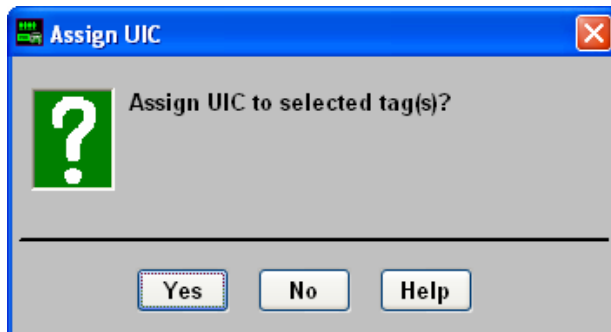


2. In the “Collect Tags / Unit Assignment” window the user will be able to collect tags and assign them to his unit (Claim the tags). Select **Interrogator** and the **AIT Location** will auto populate and then select **<COLLECT TAGS>** tab at the bottom.

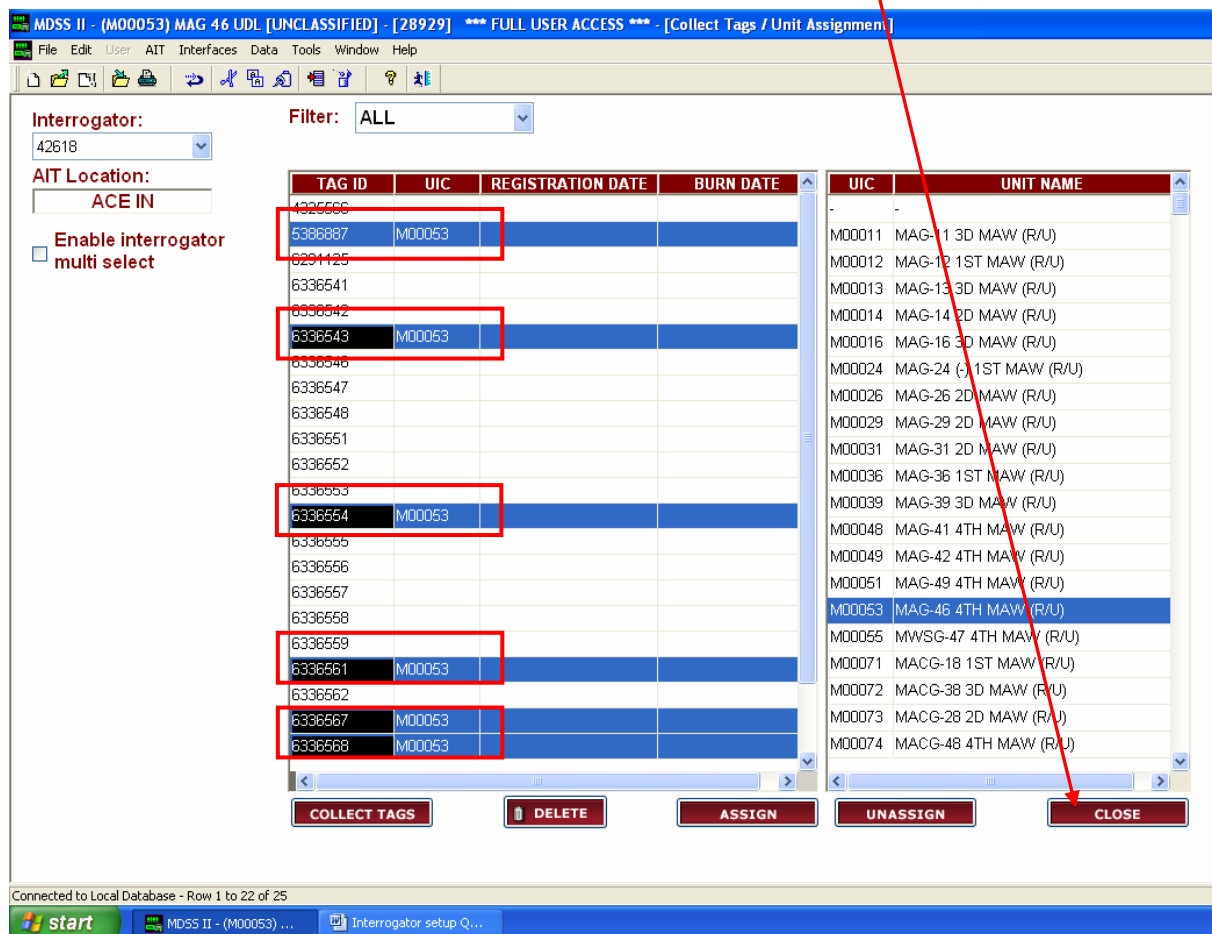
3. Once completed, all collected tags will be display on the left side of the screen. The user will assign those tags being used to his unit. In later steps this process will allow him to only view the tags assigned to that UIC. Select tag(s) by highlighting them. Then select the assigned UIC and select the **<Assign>** tab. *Note: A UIC look up is also available on this screen. If needed select <OK> after identifying the UIC, then <Assign> to assign the UIC to the tag(s).*



4. Select <Yes> to Assign UIC to the selected tag(s).



5. This assigns the Unit's UIC to the tags selected for use. Select <Close>.





ASSIGN TAGS: Tag assignment is part of the planning process you go through before burning the tags. A filter may be used on the tag listing so that you can display only the tag IDs that are assigned to a particular UIC. Assigning a tag to a piece of equipment does not write any data to the tag. The tag must be burned for data to be written to the tag. No data is sent to ITV until a burn takes place. Assignments can be done automatically to save time but must be done individually if the tags are already mounted onto a piece of equipment. While tags can be assigned to any piece of equipment, tags are primarily assigned to Principal End Items (PEI), Primary Movers and Containers.

1. Select <AIT>, <Assign Tags> this opens the “RFID Tag Assignment” window. It is here that the user will select the Items to assign to the tags. Select the <UIC> to limit the selection of tag to only the UIC the user entered.

Note: There are two Methods to do the assignments Individual Tag or Group Assignments.

Individually Assign: The assignment of one tag to one selected equipment item.

Group Assign: Select multiple tags to be assigned to cargo and then select the cargo to be assigned. If done correctly the Tags selected and Equipment selected windows at the bottom of the page will both have the same number of records.

2. Once the tags and equipment has been selected. Select <ASSIGN> at the bottom of the page.

MDSS II - (M00053) MAG 46 UDL [UNCLASSIFIED] - [28929] *** FULL USER ACCESS *** - [RFID Tag Assignment]

File Edit User AIT Interfaces Data Tools Window Help

TAG LIST EQUIPMENT LISTING Filter:

UIC: M00053

TAG ID	UIC	UIC	NSN	PKG ID/SR NBR	ITEM ID	ASSOCIATION	TCN	TAG ID	ULN
5396887	M00053	M00053	8115013540797	USMU0033116	C4433			NOT TAGGED	
6336543	M00053	M00053	8115013540797	USMU0033121	C4433			NOT TAGGED	
6336554	M00053	M00053	8115013540797	USMU0033137	C4433			NOT TAGGED	
6336561	M00053	M00053	8115013540797	USMU0033142	C4433			NOT TAGGED	
6336567	M00053	M00053	8115013540797	USMU0033158	C4433			NOT TAGGED	
6336568	M00053	M00053	8115013540797	USMU0033163	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0033179	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0033184	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0033203	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0037810	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0037831	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0037847	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0037852	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0037868	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0037873	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0037889	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0037894	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0037908	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0121069	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0121095	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0121109	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0121114	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0122804	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0122825	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0122830	C4433			NOT TAGGED	
		M00053	8115013540797	USMU0122846	C4433			NOT TAGGED	
		M00053	8115013540797	USMU1152824	C4433			NOT TAGGED	
		M00053	8115013540797	USMU1152850	C4433			NOT TAGGED	
		M00053	8115013540797	USMU1152932	C4433			NOT TAGGED	
		M00053	8115013713690	3000	C4431			NOT TAGGED	

Tags selected: 6 ASSIGN UNASSIGN CLOSE HELP Equipment selected: 6

Connected to Local Database - Row 1 to 6 of 6



3. After the records have been assigned the tags will turn Green in the “TAG LIST” window. Under the “EQUIPMENT LISTING” window there will be TAG ID assigned to those items. Select <Close> at the bottom of the page.

MDSS II - (M00053) MAG 46 UDL [UNCLASSIFIED] - [28929] *** FULL USER ACCESS *** - [RFID Tag Assignment]

File Edit User AIT Interfaces Data Tools Window Help

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BURN TAGS: After tags have been collected (possibly assigned to a particular UIC) and assigned to a piece of equipment, the tag must be burned. When the tag is burned, the system automatically attempts to register the tag with the ITV Server. Tags must be assigned to equipment in order to write data to them. Every time a tag is re-burned, the system will automatically attempt to re-register the tag with the ITV Server. If a tag is burned, but does not yet have a TCN, it will not be registered with the ITV Server. Although this does not provide the capability of tracking, it can still be useful as a way to view the contents of a container or to locate a particular item in a crowded area by activating a beeper. A tag burned without a TCN must be re-burned before deploying after the TCN/TCMD data has been generated.

1. Select <AIT>, <BURN TAGS>. Select the **Interrogator** and <COLLECT TAGS> tab.

RFID - Burn Tags

Interrogators: 42618

AIT Location: ACE IN

☐ Enable interrogator multi select

Tags to burn in range

TAG ID	Burn Date
6336543	
6336554	
6336561	
6336567	
6336568	
5386887	

Tag Format: ☒ Unit Move ☐ Sustainment ☐ Erase Only

Burn Process: ☒ Complete Write Process ☐ Create .TAV files only

Operation Type: ☒ Standard ☐ Preposition

Tag Information

Associated Tags needing to be burned: 6

Associated Tags selected to be burned in range: 6

Waiting to write TAV files...

Waiting to burn tags...

Waiting to send files to routing server...

COLLECT TAGS BURN TAGS CLOSE HELP



2. At the completion of the burning process there will be a Burn Date Assigned to the tags. **Note: In this example the computer was not connected to the internet so the transfer of file was not allowed.** After the TAV and TIP files have been burned the user can exit the window by selecting the <CLOSE> tab.

MDSS II - (M00053) MAG 46 UDL [UNCLASSIFIED] - [28929] * FULL USER ACCESS *** - [RFID - Write Tags]**

File Edit User AIT Interfaces Data Tools Window Help

RFID - Burn Tags

Interrogators:
 42618
AIT Location:
 ACE IN
☐ Enable interrogator multi select

TAG ID	Burn Date
6336543	11/17/2008 12:03:16
6336554	11/17/2008 12:03:48
6336561	11/17/2008 12:04:10
6336567	11/17/2008 12:04:43
6336568	11/17/2008 12:05:05
5386887	11/17/2008 12:02:52

Tag Format
☒ Unit Move ☐ Sustainment ☐ Erase Only

Burn Process
☒ Complete Write Process ☐ Create .TAV files only

Operation Type
☒ Standard ☐ Preposition

Tag Information
 Associated Tags needing to be burned: 0
 Associated Tags selected to be burned in range: 0

6 TAV file(s) created.
 6 Tags Burned.
 There are no files waiting to be sent.

TAV file created for TAG ID 6336543
 TAV file created for TAG ID 6336554
 TAV file created for TAG ID 6336561
 TAV file created for TAG ID 6336567

COLLECT TAGS **BURN TAGS** **CLOSE** **HELP**

Ready - Connected to Local Database

READ TAGS: There are two different types of read modes for RFID tags in MDSS II, manual and automatic. The manual (or Detailed) read is used to gather specific information about a tag. If you wish to add the data in the tag to your UDL, you can post the detailed tag information to the NEWCARGO table. **NOTE: If a tag is stationary, but is within range of an interrogator used for reads, it will use up battery life every time tags are polled. If you leave tagged items too close to an interrogator, their batteries will die quickly.**

1. Select <AIT>, <Read Tags>, <Manual/Detailed Read>.



2. Select **Interrogator** using the drop down window. The AIT Location auto populates. Select the **<COLLECT TAGS>** tab to collect tags to be read. Once selected tags have been collected the user can read a tag by highlighting the tag and then selecting the **<READ TAG>** tab. It may take a few minutes to pull up the RFID - Detailed Tag Information. This will pull up tag information the unit had burned to that tag.

MDSS II - (M00053) MAG 46 UDL [UNCLASSIFIED] - [28929] *** FULL USER ACCESS *** - [Read Tags - Manual]

File Edit User AIT Interfaces Data Tools Window Help

Interrogator: 42618

Tag Filter: ALL

Collect Type: ☐ Enhanced ☒ Basic

TCN: MM00053\$0005B70XX

TAG ID: 5386887

TCN: MM00053\$0005B70XX

PKG ID/SR NBR: USMU0033116

PO: 6291133

6291136

6291137

6291144

6291148

6291149

6336527

6336532

6336533

6336541

6336542

6336543

6336546

6336547

6336548

6336551

6336552

MM00053\$00010B70XX

USMU0033121

TAG FORMAT: UNIT MOVE

ULN: C4433

ITEM ID: C4433

UIC: M00053

MODEL NO: 138K0000

NSN: 8115013540797

BUMPER NO:

PKG ID/SN: USMU0033116

SHIPMENT NO:

UNIT NAME: MAG-46 4TH MAW (R/U)

DESCRIPTION: QUADCON

POE:

POD:

COMMODITY:

HAZARDOUS: ☒

FREE TEXT: N=8115013540797,S=USMU0033116

COLLECT TAGS READ TAG POST TAG CLOSE HELP

Connected to Local Database - Row 1 to 20 of 34

NOTE: To get detailed information the user must complete the Embarkation Workbench assigning cargo to carriers within the workbench. Then the user must complete the GTN Export this will allow the TCMD information to be burned to the Tags and will be populated in this window.

ITV UPLOAD: Conducting the Burn function, MDSS II attempts to connect to the selected ITV routing server. If, for any reason, the connection is not available or the RAS is down the user at a later time can conduct the ITV upload of any TIP waiting files. Select **<AIT>**, **<ITV Upload>**) and transfer all pending *.TIP files. If you are using the Mobile RFID capability, if there are any *.TIP files still waiting to be transferred, they are transferred as well.

E-MAILING .TIP FILES: If problems occur while conducting this process, the user will need to call the TE&AT helpdesk prior to e-mailing their .TIP files. Call or E-mail the MDSS II Help Desk for assistance. Contact information is listed at the top of the page.